

Dark Matter

SCRIPT:

Outer space is where we stretch our imaginations, making up stories about strange objects and mysterious forces. But the reality of outer space is just as good as any movie.

According to the latest research, 90 percent of the Universe is made of something invisible, something very strange called “dark matter.” And we know it’s out there, even though we have no idea what it is.

We know something is out there because the galaxies are turning too fast – so fast the stars should all fly apart. Something heavy is holding them together – something 10 times heavier than the stars themselves is holding them in place.

It’s like the Universe is an iceberg, and we can’t see the biggest part of it. The “dark matter” is below the surface and it’s 10 times heavier than everything else. It’s a huge and mysterious “something,” and scientists have no idea what in the world it could be. No wonder, then, that many scientists enjoy a good space movie. Just like you and me, they wonder about the adventures that await us in the real Universe, as we explore “dark matter,” and a million other mysteries still unknown.

Relevant NSES Standards

NSES Content Standard A: Understanding about scientific inquiry.

(Grades K-4) Forming questions by using what we know about the world.

(Grades 5-8) Understanding a question by recognizing the relationship between explanations and evidence.

(Grades 9-12) Conceptual principles guide scientific inquiry.

NSES Content Standard B: Physical science.

(Grades K-4) Materials can exist in different states.

(Grades 5-12) Properties of matter (unknown properties).

NSES Content Standard D: Earth and space science.

(Grades K-8) Properties of earth materials. (Dark matter is a possible unseen component of the world all around us.)

(Grades 9-12) Evolution and form of the universe.

NSES Content Standard E: Understanding about science and technology.

(Grades K-4) Science tries to answer questions about the world.

(Grades 5-8) Scientists do not always have explanations.

(Grades 9-12) Scientists are driven by their desire to understand the world.

NSES Content Standard F: Science in social perspectives.

(Grades 5-12) Scientific knowledge influences the way we see the world.

NSES Content Standard G: History and nature of science.

(Grades K-8) Science is not finished; much more remains to be understood.

(Grades 5-12) Scientists have always been faced with many difficult challenges.

Credits: Dr. M. Sean O’Brien, Hubble Space Telescope; Dr. Lynn Cominsky,
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